REMARKS

The Applicant has filed the present Response in reply to the outstanding Official Action of November 14, 2005, and the Applicant believes the Response to be fully responsive to the Official Action for the reasons set forth below in greater detail.

In the outstanding Official Action, the Examiner rejected Claims 11, 14-16, 24, 27, 29-32 and 34-36 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0103417 (hereinafter "Gazdzinski") in view of Takahashi, United States Patent No. 6,724,418.

The Examiner asserts that Takahashi teaches an endoscope having a luminance calculator, which successively calculates a luminance value indicating brightness of the image. The Examiner further asserts that it would have been obvious to one of ordinary skill in the art to include a detecting and correction circuit, as taught by Takahashi, in the probe of Gazdzinski.

Takahashi discloses that in a histogram processing circuit 16, the luminance signals are input and then subjected to a histogram processing, so that histogram-data is generated. The histogram-data is read from the histogram processing circuit 16 by the CPU 22. An average luminance value is calculated on the basis of the histogram-data, and then the **average luminance value is compared with a reference value** stored in a memory. On the basis of the difference, the quantity of the illuminating-light radiating from the distal end of the light guide 32 is regulated, thus preventing a halation. See Col. 4. The reference teaches that the average of the luminance value is used to regulate the light.

In contrast, as recited in Claims 11 and 24, only the luminance distribution is calculated, eliminating a calculation of the average. Specifically, the color balance and brightness detecting circuit 37 detects (calculates) the histogram of the brightness (luminance) of the image. The

color balance and brightness detecting circuit 37 then transmits the histogram to the correction amount calculating circuit 39. Reference data for a histogram of standard luminance distribution positions is previously stored in the correction amount calculating circuit 39, and correction amounts are calculated on the basis of this reference data and the histogram data. The correction amount is directly calculated from the luminance distribution and not an average thereof.

This calculation has a significant advantage over the calculation and comparison of the prior art. By using the differences from average luminance value, i.e., averaging histogram, and comparing the average with a reference or another average value, there is a potential that the proper correction will not be accomplished. A portion of the image might be too bright and a portion of the image might be too dark. In contrast, by using the claimed correction it is possible to correct the entire image without having this problem. This is because there is a direct comparison of individual luminance weighted values with respect to a reference histogram without averaging.

Accordingly, Applicant submits that Claims 11 and 24 are patentably distinct from the cited references, as the references, whether taken alone or in any combination thereof, teach, suggest or render obvious each and every limitation of the claims.

Claims 14-16, and 36 are patentably distinct based upon the above-identified analysis and based at least upon their dependency from Claims 11 and 24, respectively.

With respect to Claims 27, 29-32, 34 and 35, Applicant respectfully submits that in addition to the above-identified analysis, the claims are further patentably distinct from the hypothetically combined references based at least upon the following additional reasons.

With respect to Claims 27 and 31, Takahashi describes the color balance to be R:G:B=1:1:1. There is no teaching or suggestion to modify this ratio. Therefore, the reference does not teach adjusting the color image values and illumination values as claimed.

With respect to Claim 30, Applicant submits that the combined teachings of Gazdzinski and Takahashi fail to teach that the reference data is a histogram of standard luminance distribution positions. Rather, Takahashi teaches that the reference data is an average. Furthermore, Takahashi merely selects data for adjusting luminance thereby.

With respect to Claim 32, Takahashi does not teach calculating the luminance distribution of green, blue, and red components of the image. The reference solely teaches that the ratios of the R, B, and G signals should be balanced. However, the references never mention a luminance distribution for the R, B, and G signals. Furthermore, Takahashi does not describe a histogram as a reference or storing a histogram as a reference (just average).

With respect to Claims 34 and 35, Applicant submits that the references fail to teach the claim limitations. First, Applicant notes that the rejection is technically defective. Claims 34 and 35 are dependent upon Claim 33. Claim 33 was not rejected under § 103 vis-à-vis Gazdzinski and Takahashi, but further required Glukhovsky in addition to Gazdzinski and Takahashi for the rejection.

However, *pro arguendo*, none of the references teach an image position detecting circuit for calculating the luminance distribution of the image and then using the calculated luminance distribution in the claimed manner (as claimed in Claims 34 and 35). Specifically, the references never mention or suggest a change in the imaging range of the image sensor. In the claimed invention, the information or data is used to determine the imaging of the image sensor and the image sensor is actuated accordingly.

For example, as disclosed in the present application, the sensed image data is transmitted to the external device via an antenna. The image data is then supplied to an image position detecting circuit 36 and a color balance and brightness circuit 37, which detects the image position, color balance and brightness.

After detection, the detected signals are sent to a correction amount calculation circuit, which calculates a required correction amount. Once calculated, these values are modulated and transmitted to the capsule via a radio antenna. The image and drive control circuit receives these values, stores them in memory and causes the sensor and illumination circuit to adjust. Some of these correction parameters include a horizontal start position, a horizontal end position, a vertical start position, and a vertical end position.

Upon receipt of these parameters, the image sensor detects and transmits only image data inside a square shaped image region determined by the position data sent by the external device. By using this continuous external control, it is possible to simplify the adjustments required when assembling the objective optical system and image sensor in the capsule

Claims 27, 29-32, 34 and 35, are patentable based at least upon the reasons identified above.

The Examiner rejected Claims 26, 28 and 33 under 35 U.S.C. § 103(a) as being unpatentable over Glukhovsky, Gazdzinski and Takahashi. The Examiner avers that Glukhovsky teaches using a force acquiring device to detect movement and to adjust the imaging mode based upon the detected movement.

With respect to Claims 28 and 33, Applicant submits that the Examiner's assertion is incorrect. None of the references teach that the correction **amount calculating circuit adjusts position data**, as recited in Claim 28 or that an image **position detecting circuit calculates the**

luminance distribution of the image, as recited in Claim 33. Similarly, with respect to Claim 26, the reference fails to teach **switching an imaging mode based on a position** of said capsule medical device.

It appears that the Examiner might be misinterpreting the claims and the references. The position means the position of the image with respect to the imaging range of the image sensor.

Glukhovsky teaches indirectly or directly measuring motion of the capsule. However, Glukhovsky does not enable how the motion is measured. Glukhovsky teaches that the frame rate is varied by the measured motion. However, the reference does not teach the calculation of the luminance distribution based upon the position. Additionally, the reference fails to teach that correction amount calculating circuit **adjusts position data. Glukhovsky only teaches modifying the frame rate, the frame rate is not position data as defined in the claims.** Additionally, the frame rate is not a known equivalent thereof.

Accordingly, Claims 26, 28, and 33 are patentable based at least upon the reasons identified above; the references fail to teach, suggest or render obvious each and every limitation of the claims.

For all the foregoing reasons, the Applicant respectfully requests that the Examiner withdraw the rejections of Claims 11, 14-16, 24, and 26-36 pursuant to 35 U.S.C. § 103(a).

Lastly, Applicant would like to note that one of the references cited in the Information Disclosure Statement dated January 27, 2004 was not considered. Applicant respectfully requests that the Examiner consider Japanese Patent Number 3279409.

In conclusion, the Applicant believes that the above-identified application is in condition for allowance and henceforth respectfully solicits the Examiner to allow the application. If the Examiner believes a telephone conference might expedite the allowance of

this application, the Applicant respectfully requests that the Examiner call the undersigned, Applicant's attorney, at the following telephone number: (516) 742-4343.

Respectfully submitted,

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